

AMENDMENTS TO THE CLAIMS

Please cancel claims 16-27, such that the status of the claims is as follows:

1. (Original) A magnetic reader comprising:
an MR sensor;
a domain wall free magnetic shield, further comprising:
first and second magnetic layers;
a non-magnetic layer separating the first and second magnetic layers; and
a biasing layer to maintain the first magnetic layer as a single domain, wherein the
biasing layer additionally defines a quiet zone.
2. (Previously presented) The magnetic reader of claim 1 wherein in the quiet zone the biasing layer does not overlay the MR sensor.
3. (Original) The magnetic reader of claim 2 wherein the biasing layer is additionally spaced from the MR sensor.
4. (Original) The magnetic reader of claim 1 wherein the biasing layer is shaped so as to define a void in the biasing layer at the quiet zone.
5. (Original) The magnetic reader of claim 4 wherein the void in the biasing layer at the quiet zone is a void approximately corresponding to the size and shape of the MR sensor.
6. (Original) The magnetic reader of claim 4 wherein the void in the biasing layer at the quiet zone is a void roughly the width of the MR sensor extending through the biasing layer.

7. (Original) The magnetic reader of claim 1 wherein the biasing layer is a hard magnetic material.
8. (Original) The magnetic reader of claim 7 wherein the hard magnetic material is selected from the group consisting of: CoPt, CoCrPt, CoCrTa and CoPdCr.
9. (Original) The magnetic reader of claim 1 wherein the biasing layer is an antiferromagnetic material.
10. (Original) The magnetic reader of claim 9 wherein the antiferromagnetic layer is selected from the group consisting of: NiMn, NiMnCr, PtMn, PdPtMn, CrMnPt, CrMnCu, CrMnPd and PtRuMn.
11. (Original) The magnetic reader of claim 1 wherein the first and second magnetic layers are formed from one or more soft magnetic materials selected from the group consisting of: NiFe, cobalt amorphous alloys, FeN, permalloy and sendust.
12. (Original) The magnetic reader of claim 1 wherein a product of a thickness of first magnetic layer and a magnetic moment of first magnetic layer approximately equals a product of a thickness of second magnetic layer and a magnetic moment of the second magnetic layer.
13. (Original) The magnetic reader of claim 1 wherein an easy axis of the first magnetic layer is preferably parallel to an easy axis of the second magnetic layer.
14. (Original) The magnetic reader of claim 1 wherein a magnetization of the second magnetic layer is oriented antiparallel to a magnetization of the first magnetic layer due to demagnetization fields.
15. (Original) The magnetic reader of claim 1 wherein the biasing layer is oblique deposited.

First Named Inventor: Declan Macken

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16-27. (Canceled)